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ABSTRACT

This paper reviewed change strategies based on concepts of organizational learning adopted by four higher education institutions. The study sought to examine the complexities and challenges of applying change management principles and processes derived from corporate management cultures to the administration and governance of higher education. A literature review revealed four institutions which had undergone transformation or reinvention. Based on this information, four case studies were developed that compared institutional change strategies to criteria that assessed strategic change from an organizational learning perspective. Follow-up interviews with senior members of the institutions were conducted to validate the case study findings. The case study material suggested that the institutions examined were in alignment with strategic learning processes, but that higher education lags behind truly innovative organizations in terms of preparing for multiple futures. While interviewees suggested that terms such as "organizational learning" tended to receive negative attributions within their institutions, they did find that describing elements of their institutional change processes from an organizational perspective was helpful in evaluating the processes. (Contains approximately 55 references.) (MAB)

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Intervening For Transformation: An Organizational Learning Perspective

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Abstract

This paper examines change strategies adopted by four higher education institutions from the perspective of organizational learning. This study, based upon a literature review, document analysis, and participant interviews, seeks to illuminate some of the complexities and challenges of applying change management principles and processes derived from corporate management cultures to the administration and governance of higher education.

The environment of the university is growing increasingly complex and turbulent. Demographic changes, leading to sudden shifts in demand; economic downturns and funding cutbacks, placing pressure on endowments and debt service; technological advances allowing for increased competition from distance and corporate providers; and growing consumer sophistication are among the factors requiring a more resilient and adaptive university structure. Some college administrators have called for an increasing use of strategic change management practices originating from the corporate business and industry sectors to prepare the academy for the vicissitudes of academic markets in the 21st Century (McDonald, 1987; Walsh, 1991). Incorporated within these recommendations are calls for "quality" in education, more effective supervision, more top-down control over faculty, and more standardization of administrative matters and procedures as appropriate interventions from the "organization as a rational system" mind set. Alternatively, viewing organizations as interpretive systems suggests understanding organizational performance from a learning perspective (Cyert & March, 1963; Levitt & March, 1988; Weick, 1979). Daft and Weick (1984) proposed a model of organizations as interpretive systems with learning as a key element. They posited that environmental scanning leads to a stage specified model of learning through which meaning is assigned to data from the environment, which are then interpreted, shared and cognitively construed, and "learned" through an organizationally determined framework

The study described in this paper posed two questions: First, to what extent are published frameworks for understanding strategic change through the lens of organizational learning applicable to higher education institutions? Second, when using organizational learning as a construct for evaluating strategic change within higher education institutions, to what extent do higher education institutions find this construct to be a useful intervention for transformation. A literature review revealed four institutions who, by self report, had undergone transformation or reinvention. Document analysis was conducted on these institutions and four case studies were developed that compared and contrasted the institutional change strategies to criteria for assessing strategic change from an organizational learning perspective. Follow-up interviews with senior members of these institutions were conducted to validate the case study findings.

Literature Review

Simon (1969) defined organizational learning as the reflection, in the structural elements and outcomes of the organization, of individuals' growing insight and successful restructuring of organizational problems. Dixon's (1992) exhaustive literature review noted Simon as one of the earliest contributors to this line of inquiry. Dixon identified her review as the sixth over the last ten years, but

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the first to be developed from the human resource development (HRD) perspective. She extended and modified Huber's (1991) classification to include five major areas: "(1) information acquisition, (2) information distribution and interpretation, (3) making meaning, (4) organization memory, and (5) retrieval of information" (p. 32). Dixon's HRD lens was apparent in her process-oriented classification system. Her review concentrated on the literature of how learning takes place, rather than that focused on outcomes of learning. Naturally, this is useful information for the HRD professional, given that the responsibility for learning is located within HRD in many organizations. However, Lundberg (1993) took a broader perspective when he stated that:

> . . . organizations which have learned behave differently than they did before. While there is some diversity in both the what and the how of organizational learning, there is important agreement as well: (1) that organizational learning is more than the sum of members' learning, (2) that environmental alignment is vital, and (3) that the probability of learning is affected by the degree of environmental turbulence, the rigidity of organizational structure, the adequacy of the organization's strategy, and the strength of its culture (p. 34).

Lundberg's description is behaviorally oriented and sensitive to the impact of organizational environments.

Early studies during the 1960s on organizational environments looked at how the environment influenced performance and design as well as turnover. Katz and Kahn's (1966) pivotal work conceptualized the *open systems* nature of organizations. Subsequent work was influenced heavily by this research. Katz and Kahn's open systems approach integrated two research paradigms that had been separate up to that point: early studies examined either the organization's adaptation to its environment (Dill, 1958; Evan, 1966) or the environment itself (Emery & Trist, 1965; Terreberry, 1968). Certainly Emery and Trist's conceptual schemes for assessing variations in environments, such as complexity, turbulence, and predictability, laid essential groundwork for the early work on organizational learning. These refinements in the research led to the realization that the two key dimensions, unit of analysis (job, work, department, organization) and level of analysis (individual, team, organizational, community, society), needed to be considered as separate, yet interdependent (Davis and Powell, 1992, p. 316). As the systems approach gained understanding and acceptance, the individual became less and less the key level of organizational analysis.

Accepting the systems view (Beer, 1980) is critical to understanding Senge's description of the learning organization. Also dependent on a systems view is the evolution of the Tavistock Institute's work into sociotechnical systems (or Quality of Work Life) and then into large group- and system-level organization development interventions, such as search conferences and open space.

Giddens (1991) discussed dilemmas of the self and then, using a systems approach, applied them to organizations. The first dimension is that of unification versus fragmentation. Organizations experience this as the challenge to share a vision in the face of complex, contradictory, and unpredictable environments. The second dimension is the empowerment versus powerlessness dilemma; the global environment offers numerous market opportunities but they are almost impossible to forecast or anticipate. The third dimension concerns unprecedented levels of ambiguity; organizations need to act in the presence of risk while maintaining high quality, predictability and standardization. Finally, the growing personal marketplace provides unlimited opportunity for differentiation, but the economic environment more often rewards cost leadership. These dilemmas present challenges for individual and organizational learning. Working strategies for survival cannot rely on blind adherence to tradition or obedience to authorities. As organizations and individuals face a more complex and open environment, the actions taken should be tailored for each challenge. Learning must be directed toward changing ways of thought and action for organizations to survive and flourish (p.187-201).

When organizations are viewed as evolving sociotechnical systems, a continuous struggle between seeking change and seeking stability emerges (Pasmore, 1994). Lundberg identified three points on this continuum as the fundamental organizational tasks of adjustment, adaptation and anticipation.

Table 1 (See Table 2, Lundberg, 1993, p.38)

Fundamental Organizational Tasks

Fundamental Organizational Task	***Initiating Stimuli***	***Organizational Learning Focus***	***Primary Learning Mechanism***	***Learning Outcomes***
Adjustment	*Novel Problem*	*Operational Cause-Map*	*Reformulation of Action-Outcome Relationships*	*More Effective Management of Internal Operations*
Adaptation	*Puzzles*	*Strategic Beliefs*	*Modification of Strategies & Premises*	*Improved Organization-Environment Alignment*
Anticipation	*Predicament*	*Core Values & Assumptions*	*New Vision of the Cultural Core*	*Enhanced Organizational Sense-Making & Anticipation*

Adjustment learning falls into the category Bateson (1972) labeled as first-order change. Adaptation and anticipation are second-order changes, or what Argyris and Schön (1978) referred to as double-loop learning. However, adaptation may result in single- or double-loop learning.

> Most organizational change, they [Argyris and Schön] contend, can be characterized as the result of single-loop learning in which new actions are generated without changing the unstated, implicit assumptions (variously referred to as governing variables, mental models, paradigms, etc.) that underlie organizational actions. In contrast, double-loop learning requires the surfacing and altering of preexisting assumptions and the taking of fundamentally different forms of action as a result (Jeris, May, Redding, 1996, p. 6-1).

As powerful a concept as organizational learning might be on its own, it failed to ignite substantial contributions to the organizational sciences literature until Senge popularized the metaphor of the learning organization. McKenna and Wright (1992) wrote:

> In the case of the abstract metaphor, one end of the comparison—the abstraction—is by definition hard to visualize or grasp. For the abstract metaphor to do its work, the other end of the comparison needs to be concrete, vivid, and familiar to the audience. The more vivid the visual image evoked in the audience by the metaphor, the more clearly and creatively they will be able to think about the abstraction (p. 907).

The *learning organization* (LO) was the concrete image which enabled academics and practitioners alike to discuss the abstract idea of *organizational learning* (OL). This may explain the explosion in contributions to the literature on this topic since Senge's book, The Fifth Discipline was published in 1990.

DiBella (1995) provided some helpful insights by grouping the literature on learning organizations into three perspectives: *normative*, *developmental* and *capability*. Senge's work is visible within the normative perspective because it assumes that becoming a LO is the desired state of an organization. This literature is highly prescriptive and provides vision-oriented, competency-driven strategies for managers to instill within their organizations. The literature grouped under the developmental perspective also assumes that the most realized, most self-renewing organizations will be

learning organizations. However, the subject is treated within a historical context. Further, DiBella asserted that the stage of development shapes the organization's learning style. Within this perspective two orientations are visible: that the LO is always in a state of becoming, or alternatively that there is a fully realized, attainable state for a LO. The capability perspective departs from the other two in that the literature written from this point of view assumes that *all* organizations have the capability to learn and that the way organizations go about it is embedded with the culture, structure, and purpose of the organization. It also assumes that various units within the organization pursue learning differently depending on the nature of the work. Management's responsibility within this perspective is to understand and leverage learning styles for maximum organizational performance (pp.287-290).

Argyris and Schön's (1996) review divided the literature on organizational learning into two main categories: "the practice-oriented, prescriptive literature of the 'learning organization,' promulgated mainly by consultants and practitioners and the predominantly skeptical scholarly literature of 'organizational learning' produced by academics" (p.180). These authors found that,

> . . . the underlying notion of a learning organization is broadly shared and includes notions of organizational adaptability, flexibility, avoidance of stability traps, propensity to experiment, readiness to rethink, reflect, realization of human potential for learning in the service of organizational purposes, and use of organizational settings as contexts for human development (p.181).

Argyris and Schön concluded that proponents and skeptics alike are concerned about the ability of organizations to translate the conceptual framework of organizational learning into effective actions (p. 199).

Higher Education as Organizational Context

Time is sensed and interpreted differently in academic institutions from the business sector. *Industrial age* or *information age* are markers used to describe sea changes in the latter, while *middle ages* still holds meaning as a signifier of relevant and honored traditions in the academic community. One has only to attend a commencement ceremony to experience the homage paid to tradition and stability. Yet the economic realities of running an enterprise have a way of crossing the boundary between external and internal environments, regardless of the values and traditions held in high regard by that enterprise. Public institutions of higher education face daily negotiations for funding at the federal and state levels. Private institutions, particularly the small tuition-driven colleges where even a one percent drop in enrollment can have dramatic fiscal consequences, must be acutely tuned to the external environment if they are to survive. Organizations, including colleges and universities, are announcing major "cultural change" initiatives that they see as essential for them to become more competitive.

Culture appears to be the preferred lens for understanding transformation within higher education, but it is a term loaded with different meanings for different groups. The phrase "cultural revolution" in the sixties was associated with worldwide social upheavals—in the US in connection with the anti-war movement, in China with the Red Guards. As this phrase has been adopted throughout the organizational sciences literature, its meaning has flattened. "Cultural revolution" has come to mean an organization-wide, comprehensive change effort. The pressures for such changes are created by dramatic shifts in the external marketplace. Customers (students), once captive to the few choices available, are becoming much more sophisticated in their demands. Stakeholders (donors, taxpayers) want greater returns on their investments. Yet inside the institution, there is a struggle to determine where assessment should happen: at the level of direct contact with the customers, or the level of senior leadership, who came up through the organization without the need to understand and respond to fast-changing external markets. These conflicts play out in academic institutions as often bitter dissent between faculty and administration.

Higher education institutions in the United States are confronted with many complex and often emotional issues pertaining to both curricula and institutional practices. Boyer (1987), Kerr (1994), and Levine (1994) have been instrumental in identifying critical issues for higher education. While a thorough review of this literature is not within the scope of this paper, contextualizing the critical environmental issues specific to higher education reveals connections between higher education and the business sector.

Issue 1: Increasing diversity in higher education institutions

The student population of higher education institutions is becoming more diverse, in terms of race, economic background, age and other factors. This diversity is raising many questions about the curricula and instructional practices in higher education, including issues of language, content of the curriculum, and developmental readiness.

Issue 2: Performance standards and assessment practices

At the elementary and secondary level, considerable effort has been expended to develop new performance standards in many discipline areas. In addition, a great deal of debate has been occurring about appropriate assessment strategies and methodologies. The discussion of performance standards and assessment is beginning to be heard throughout higher education. Key questions are the role of national discipline standards in curricula, the use of alternative assessment procedures at all levels, and who controls the canon.

Issue 3: The role of technology in higher education

New technology developments are changing the way Americans work, play, and live their lives. Many of these new technologies have potential applications for education at all levels. Yet many argue that the increased use of electronic media within higher education might fundamentally damage the character of the institution. Discussions that should really center on mission-critical learning outcomes end up as acrimonious debates over scarce resources. Seldom is the collective imagination engaged to consider how higher education might change as a result of adopting technologies on a mass scale.

Issue 4: Impacts of global perspectives on curriculum and institutional practices.

The global marketplace/global village paradigm shift poses serious challenges for the parochial nature of higher education. How will the establishment respond and what changes will be necessary in the framing assumptions of the belief system for higher education?

The challenges noted above, along with dozens more left unstated, form the subtext for Clark Kerr's remark, ". . . it is an unsettled period in university life, perhaps the most unsettled since the Reformation in Western Europe" (1994, p. 9).

The Table 2 summarizes many of the challenges noted throughout this literature review and anticipates some of the case study material that will follow, as examples of higher education institutions are shared in an effort to ground this review in current practices.

Table 2

The Changing Nature of Work

	Past to Present	Present to Future
Organization	Hierarchical	Flat—Clusters of Work Groups
Orientation	Provincial & Inward Looking	Global & Outward Looking
Resources	Centralized	Decentralized
Information	Channeled & Static	Free flowing & Dynamic
Concept of Work	Stable	Work as Learning
Focus	Tasks	Outcomes
Perspective	Individual	System-wide

Can Higher Education Institutions Become Learning Organizations?

Posing this tongue-in-cheek question to colleagues within higher education usually provokes slight squirming, a sardonic chuckle or two and little or no discussion. On a more serious note, a search of the literature regarding organizational learning or learning organizations within the context of higher education yielded virtually nothing. Considerable experimentation with electronic searches using a variety of key words produced more encouraging results, which are discussed in the following paragraphs.

Early work on this review was concerned with trying to find some operational definitions for the search terms that produced the highest yields—such as assessment, evaluation and institutional effectiveness—because the terminology in the area is confusing. The contributors to this literature use a variety of words to describe the same concept. Assessment and evaluation are used interchangeably, as are appraisal and assessment, but evaluation and appraisal do not yield similar sources in the search process. Fortunately, a dissertation provided a taxonomy of the institutional effectiveness literature in public higher education from 1970–1990 (Welker, 1990). The dissertation author noted that the confusing terminology is a defining characteristic of this literature. Welker's exhaustive review included representative definitions that he believed captured the meaning of these terms with sufficient clarity to make them operational.

First, the organizational effectiveness literature was organized by institutional type, and since Welker's interest was in four-year public institutions, simple subtraction revealed that the literature is small when it comes to private institutions. Second, because Welker dealt mostly with large institutions, many of his references were written from a departmental perspective. This inquiry's goal was to locate at least school-wide, if not institution-wide perspectives on effectiveness. Application of Welker's taxonomy and additional criteria led to accounts of institutional and school redesign at four institutions: Ohio University, Alverno College, Northeast Missouri State University, and the Weatherhead School of Management (WSOM) at Case Western Reserve University. The goal was to find case material on these

innovations (which were never labeled organizational learning) and then go back to some of the source material used by the leaders in those change processes.

Results

Although the first three institutions mentioned above used an assessment-driven approach to continuous quality improvement, Weatherhead School of Management (WSOM) was a vision- and mission-driven innovation in professional education, indicating that the significant unfreezing events of its change processes had different origins, the former from assessment data and the latter from a revisioning process (Loacker, 1986; Boyatzis, 1995). Because there were so few case examples that met this inquiry's requirement for breadth and depth of change, the public/private distinction was abandoned and the character, sources and outcomes of the change processes were examined rather than the organizational context. Further reviews will be necessary to determine if this was a wise choice.

Each example included in this review used an approach unique to its institutional goals and desired outcomes. However, the literature on quality improvement processes is rich with attributes common among organizations that are successfully redesigning themselves. Schein (1985), Deal and Kennedy (1982), Ciampa (1991), Juran (1988 & 1989) and Deming (1986) all agreed that the following elements were prerequisites for successful implementation of an institution-wide quality improvement process:

- Commitment to a commonly held vision of the future.
- An organizational mission that clearly indicates strong institutional identity and purpose.
- A flatter organization where decision making capability is closely linked to service delivery.
- Constant communication across the organization.
- Numerous opportunities and vehicles for gathering data from the external environment, including all institutional stakeholders.
- A performance management system with high accountability.
- A reward system that is clearly linked to institutional performance.
- Commitment to a continuous process rather than episodic reforms.

These eight attributes are far from exhaustive but their absence in a system-wide change effort would be difficult to overcome. In addition, conflicting values at the top, heavy resistance to change, employee apathy, insurmountable barriers between organizational components, lack of long-term focus, and a blaming culture characterize failed quality improvement processes (Weber & Sorensen, 1994).

During the mid-eighties the for-profit sector in the United States was falling all over itself getting on board with "Quality." Deming finally got the attention of America through his work with Japanese manufacturers, work that had been ignored here for forty years (Deming, 1986). The results of TQM in Japanese businesses brought American manufacturers to their knees. Similarly, the not-for-profit sector was catching the quality bug. There were many voices calling for accountability and reform in the nation's educational system. However, nearly twenty years passed between the signing of the Elementary and Secondary Education Act of 1965 (ESEA) and the appearance of significant contributions to the literature on institutional effectiveness. Welker (1990) found that, "By the 1980s education evaluation had taken on an entirely new dimension. Going beyond the evaluation of individual programs and departments, 'institutional effectiveness' was introduced into the literature. Other government mandates called for reform such as the National Commission on Excellence in Education (1983) and American Council on Education (1982)" (pp. 19 - 20). In a 1985 speech, Secretary of Education William Bennett stated that colleges should state their goals, measure their success in meeting them, and make the results available to everyone. Through hindsight, the influence

of the private sector on educational institutions is clear when it comes to quality fever and accountability (p. 21).

In 1985 the Commission on Colleges of the Southern Association of Colleges and Schools (SACS) changed its accrediting criteria to include planning and evaluation. The new criteria placed evaluation on an equal basis with other institutional processes in their "Criteria for Accreditation." SACS used the term institutional effectiveness, rather than outcomes, to convey that the process involved was far more inclusive than just department evaluation activities. Winfield focused on the need for faculty support and relied heavily on the concept of participation to ensure that new effectiveness strategies succeed in the long term (In Bogue & Saunders, 1992, p. 61-64). Cameron (1985), among others, noted that effectiveness is extremely difficult to define and measure in colleges and universities. She further stated that indicators of effectiveness are not obvious, principles for improving and maintaining effectiveness are not fully developed, and no standards exist against which to judge effectiveness.

The North Central Association of Colleges and Schools Commission on Institutions of Higher Education (NCA) focused the assessment planning process on student achievement, and its interpretation of SACS's August 1993 Commission on Institutions of Higher Education Statement on Assessment of Student Academic Achievement was narrower than the position taken by SACS. The Commission's statement elaborated on the third and fourth criteria for accreditation, "The institution is accomplishing its educational and other purposes," and "The institution can continue to accomplish its purposes and strengthen its educational effectiveness" (1994–95, p. 76).

> Not only must an institution have a plan and program for assessing student academic achievement, but also that plan and program should be related to other institutional strategic and long range plans and planning processes . . . Evaluation of institutional effectiveness, like assessment of student academic achievement, calls for a program that provides consistent information to assist the institution in making useful decisions about the improvement of the institution and in developing plans for that improvement (Handbook of Accreditation Draft, 1994-95, p. 76)

One of the framing assumptions of continuous improvement processes is that they must be proactive. SACS developed its accreditation guidelines by partnering with some very forward-thinking institutions within the southern region. In this way SACS gathered best practices data and is using them to coach other less innovative institutions. That is, SACS is conducting accreditation responsibilities in a developmental rather than regulatory, manner. Because continuous improvement requires continuous learning, some of the indicators of "Strategic Readiness," as described by Redding and Catalanello (1994) in their book of the same title, are very helpful. Tables 3 classifies the institutions noted earlier in this review according to six specific interventions that set the stage for organizational learning and increase speed, depth, and breadth of learning. The assignment to categories was derived from case study material produced during the various literature searches and validated through follow-up interviews. Although compiling the data in this fashion can provide only a glimpse of the institutional reframing that occurred, it revealed the common elements present that were essential to quality improvement if not organizational transformation.

In a report focused on innovations in higher education, Curry (1992) described innovative organizations as *learning organizations* when they had the capacity to change in response to alterations in the external environment, encouraged a norm of innovation, promote systemic self-study, evaluation and development, and encouraged shared leadership. As encouraging as the case study material appears to be in terms of alignment with strategic learning, noticeably absent except at WSOM was any indication that these forward-thinking organizations were preparing for multiple futures. Higher education lags behind truly innovative organizations in this dimension. The focus is still on the classroom as the primary site for efficiently and effectively delivering product/services. What these innovating institutions shared is an increased focus on "learning" as opposed to "teaching."

Table 3
Institutional Case Studies

Institution Intervention	Ohio University	Alverno College	Northeast Missouri State	WSOM at Case
Heightened Strategic Awareness	"Institutional Impact Project" integrated into planning process of the institution. Helped university define its mission and judge its quality (Williford & Moden, 1993).	Improved learning by articulating and making public the abilities students must demonstrate (Loacker, 1986).	Constant communication from leadership. Leadership modeled the changes (McClain & Krueger, 1985).	Core group of faculty championed the change and made it their personal mission to heighten WSOM awareness around need for change (Cowen, 1994).
Learn From The Past	Extensive use of longitudinal data that was reviewed both for assessment and for planning	Challenge from the president to look at the past and present to create the future (Alverno Publications, 1989).	Deep self examination to chart new direction (Ewell, 1984).	Systemic self-study with goal of challenging convention and tradition (Cowen, 1994).
Prepare For Multiple Futures	No specific evidence that this occurred.	Although no precise evidence was found, the flexible nature of the planning processes and high stakeholder involvement made this likely.	Articulated strategy - stave off entropy as opposed to invent the future (McClain & Krueger, 1985).	Problem posing from the perspective of "learning" as the purpose of education (Boyatzis, Cowen, Kolb, 1995).
Shared Vision	Many multi-level and cross-functional task forces and high visibility of the leadership	High involvement from all stakeholders made a shared vision a reality.	Strong presence of leadership team, highly visible and ever-present (McClain & Krueger, 1985).	Long term process, highly collaborative and created the shared vision (Cowen, 1994).
Learning through Discovery, Trial and Error	System reviewed and modified frequently. Ad hoc assessments included from time to time. Somewhat more procedural than the other schools included in this discussion.	Faculty designed assessments were diverse and original, closely tied to the institutional mission and desired outcomes (Loacker, 1993).	In many ways improved existing processes, not a highly experimental model.	Continuous and comprehensive stakeholder involvement both to get new ideas and to get feedback on innovations (Boyatzis, Cowen & Kolb, 1994).
Flexible Structures	Permeable boundaries permitted free flow of information that fostered faculty participation	Dynamic interactive system with minimal critical specification.	Decentralized assessment to department level to increase participation and decrease threat (Krueger, 1992).	Structure was not dramatically altered because redesign was within the WSOM, not institution wide.

Indeed, the movement to assess this learning seems to call for a shift from the emphasis on presenting disciplinary knowledge to an emphasis on what students are learning. There appears to be a growing consensus that, rather than imparting a sometimes arbitrary body of facts and theories, teaching students how to think and how to construct ways of knowing are the important objectives. These changes indicate the presence of systemic (double-loop) learning and attendant reconceptualization of framing assumptions. According to Redding and Catalanello (1994) this learning ". . . provides deeper, systemic solutions to the problems and roadblocks encountered, often resulting in the need to modify the fundamental norms, management practices, procedures, structures, and processes of the organization" (p. 32-33). To accomplish this shift in emphasis, the conventional approach to academic program review as a closely held faculty responsibility must be replaced by a more reflective, process-based review that clearly demonstrates the connections to institutional vision and mission and is an integral part of the strategic planning process.

The Association of American Colleges (AAC), recently renamed the Association of American Colleges and Universities, has been engaged in a national effort to promote such review. "The goal of a review should be the self-consciousness of faculty members and administrators about their educational practices so they can improve the quality of teaching and learning" (Association of American Colleges, 1992, p.1, in Gentemann, Fletcher & Potter, 1994, p. 35). What continues to be missing is a solid commitment from the higher education community to engage in unflinching and continuous external environmental scanning in an effort to anticipate and cope with unstable and unpredictable environments. Educational institutions are maddeningly insular in their thinking and behavior. If higher education institutions were to ask themselves the following questions as an integral part of their strategic change process, framing assumptions would be challenged in a far more rigorous manner.

- What are the most important learning outcomes for students to achieve?
- How should these outcomes be assessed so that both evaluative and diagnostic needs are met?
- In what ways are the learning styles and diversity of students' needs incorporated into individual learning plans?
- What learning strategies have been very effective? How can they be improved and shared?
- How can the needs of part-time, commuting students be met to make inquiry-based learning opportunities available to them off-site?
- In what ways do existing institutional practices and norms support the deep and collective reflection on these questions?

Throughout this discussion, numerous sources indicated that a shift from teaching to learning is the direction to take for the future. But through what system-wide processes is this need discerned? What are the data sources, and how are the inputs and outputs measured in terms of what *ought* to be done rather than what is done? Hamel and Prahaled, the same authors who pioneered the examination of core competencies as a way to establish competitive market position, have developed a new strategy paradigm. It calls for not just a reformulation of strategy, but a reformulation of the senior management role in creating strategy (1994, p. 30). The new strategy paradigm includes the present day model, but goes beyond it in an "and/also" approach. Leaders are asked to focus globally in addition to locally, industry-wide in addition to organization-wide. Reduced cycle time, double-loop learning, and comprehensive communication and information exchange capabilities will be minimal requirements for the future. Continuous quality improvement processes, which are largely single-loop tweaking and twitching of existing operations, will be operational level considerations rather than strategic. Environmental scanning and learning from the scans are, and will continue to be, the competitive edge tools for the successful organizations of the twenty-first century.

Final Evidence

Several senior faculty and one senior administrator from each of the four institutions studied participated in open-ended phone interviews. The results of the literature review-based case studies were sent to each interviewee in advance. The interview subjects validated the findings of the case study analyses and then responded to the second research question posed in this inquiry: When using organizational learning as a construct for evaluating strategic change within higher education institutions, to what extent do higher education institutions find this construct to be a useful intervention for transformation? There was consensus among the interviewees that terms such as "organizational learning' and learning organization" tended to receive negative attributions within their environments. Faculty in particular were skeptical of what they perceived as "interventions du jour" on the part of administrators. However, the interviewees did find the description of elements of their institutional change processes from the organizational learning perspective to be helpful in evaluating where they had been and where they were going.
Convergent characteristics among all the institutions examined were:

- Perceived dramatic change in the external environment.
- A drive at the most senior levels of the organization to respond positively to change to survive.
- Organizational willingness and capability to cast a broad net for information and stakeholder involvement to bring about change.
- Limited ability to engage in deep reflection that would support organizational transformation as opposed to adaptation or adjustment.
- Clear preference across all institutions to catalyze and/or support change through restructuring and often downsizing, at least at a division if not institution-wide level, rather than through longer-term systemic change.
- Clear preference across all institutions to minimize bureaucracy.
- Outcomes measurement was present in all institutions studied.
- Most institutions had a change champion with some previous experience in a change strategy.
- Some understanding that coping with change was the leadership core competency for the future and that the constant activity is experimentation.
- Low to moderate integration of parallel change processes across even relatively small institutions.
- Clear preference for using the terms "change" or "continuous improvement" over "organizational learning" or "learning organization."
- Unmet need for communicating the change initiatives throughout the institution and preparing people for them through training, reorganization, or learning new behaviors.
- Acknowledgment that creating an environment where assumptions are freely challenged was very difficult.

Conclusions

All of the institutions explored in this paper were engaged in serious strategic change efforts requiring substantial inputs and outputs of new learning. Common threads emerged from this examination that were linked to the capacity to deeply explore, reflect upon, and challenge assumptions regarding their complex relationships with the environment. The observations noted above, gleaned from the literature-based case studies and interviews of senior members of higher education institutions, set forth some of the precursors, drivers, and approaches to strategic change within the education sector. They are descriptive rather than prescriptive. They are neither "best practices" nor intervention

strategies. The institutions included in this study all reported that creating risk-friendly cultures where mistakes were treated as learning opportunities was very difficult. Perhaps this difficulty underlies the penchant for "best practices," or prescriptions for becoming a learning organization even when the idea of a learning organization is not well received within the culture. Pointing to success elsewhere hedges the bet, or at least lends a measure of security, perhaps false, to the initiatives.

Higher education institutions must produce new ways of thinking and acting for changing environments. The best examples of learning may well be found from innovative practices, rather than from theories of learning. To achieve transformation in complex environments, institutions must focus on learning that produces innovations in relation to themselves *and* their environment. Not only how institutions learn is in question, but often how the environment learns as well. Conceptualized in this way, learning from extensive and continuous attention to environmental scanning, will provide the competencies and information that institutions need to successfully engage their environments. Innovations—solution, process, or systems—will emerge when learning is achieved through a dialogue grounded in deep reflection on existing assumptions. Institutions can never know if adaptation or transformation is the right path until members are encouraged and supported in reframing practices and problems in new and creative ways.

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